Reply to Office Action of August 7, 2006

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for manufacturing a radiation image conversion panel,

comprising the steps of:

a) calcining a stimulable phosphor in a furnace at a furnace temperature of 750-900°C for

2 to 6 hours, then reducing the temperature of the furnace to 750°C or less over a period of at

least 30 minutes to form a calcined product of stimulable phosphor;

b) dispersing the calcined product of stimulable phosphor in methyl ethyl ketone with a

propeller stirrer to obtain a slurry, wherein the amount of the stimulable phosphor is 10 to 300

parts by weight per 100 parts by weight of methyl ethyl ketone;

c) eliminating grains that are of at least a predetermined size from the slurry of step b)

using wet classification wherein a final mesh in the wet classification is no more than 50 μ m;

d) adding to the slurry of step c) a polyurethane binder that is substantially soluble

therein, to prepare a coating material, wherein the polyurethane binder and the stimulable

phosphor are mixed in a ratio by weight of 1:8 to 1:40; and

e) applying the coating material to a support and drying to thereby form a phosphor

layer;

wherein the stimulable phosphor is BaFBr:Eu, BaFI:Eu or a mixture thereof.

2. (Canceled)

3. (Original) A method for manufacturing a radiation image conversion panel according

to claim 1, further comprising the step of adjusting density of stimulable phosphor in the slurry

by concentrating the slurry after the step of eliminating grains that are of at least a predetermined

size, and prior to the step of adding a binder.

4. (Original) A method for manufacturing a radiation image conversion panel according

to claim 1, wherein the step of eliminating grains that are of at least a predetermined size,

includes repeating wet classification a plurality of times.

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5-8. (Canceled)

9. (Original) A method for manufacturing a radiation image conversion panel according

to claim 1, wherein the step of eliminating grains that are of at least a predetermined size,

includes wet classification employing at least one process selected from the group consisting of

filtration and screen vibration.

10. (Original) A method for manufacturing a radiation image conversion panel according

to claim 1, wherein the step of eliminating grains that are of at least a predetermined size,

includes using wet classification employing meshes arranged in a plurality of stages having

decreasing mesh sizes.

11. (Original) A method for manufacturing a radiation image conversion panel according

to claim 9, wherein the filtration is pressure filtration.

12. (Original) A method for manufacturing a radiation image conversion panel according

to claim 3, wherein the step of adjusting density, includes concentrating the slurry by

decantation.

13. (Canceled)

14. (Previously presented) A method for manufacturing a radiation image conversion

panel, comprising the steps of:

a) dispersing a calcined product of stimulable phosphor in a dispersion medium, to obtain

a slurry;

b) eliminating grains that are of at least a predetermined size from the slurry of step a),

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using wet classification;

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c) substituting the dispersion medium with a solvent capable of substantially dissolving

the binder, while maintaining a slurry in steps (a) - (c);

d) adding to the slurry of step c), a binder that is substantially soluble therein, to prepare a

coating material; and

e) applying the coating material to a support and drying to thereby form a phosphor layer.

15. (Original) A method for manufacturing a radiation image conversion panel according

to claim 14, wherein the step of substituting the dispersion medium includes concentrating the

slurry to adjust density of a stimulable phosphor in the slurry.

16. (Original) A method for manufacturing a radiation image conversion panel according

to claim 14, wherein the step of eliminating grains that are of at least a predetermined size,

includes repeating wet classification a plurality of times.

17. (Original) A method for manufacturing a radiation image conversion panel according

to claim 14, wherein the step of eliminating grains that are of at least a predetermined size,

includes using a final mesh size in the wet classification of no more than 50 μ m.

18. (Currently amended) A method for manufacturing a radiation image conversion panel

according to claim 14, wherein the step of dispersing includes providing a calcined product of a

stimulable phophor_phosphor_that is a rare earth-activated alkaline earth metal fluoro-halide

based phosphor, represented by a constitutional formula (I) as follows:

 $(Ba_{1-a}, M^{II}_{a})FX^{\cdot}bM^{I\cdot}cM^{III\cdot}dA:xLn$ (I)

wherein, M^{II} indicates at least one kind of alkaline earth metal selected from the group

consisting of Sr, Ca, and Mg; MI indicates at least one kind of alkali metal selected from the

group consisting of Li, Na, K, Rb, and Cs; MIII indicates at least one kind of trivalent metal

selected from the group consisting of Al, Ga, In, Tl, Sc, Y, Cd, and Lu, wherein compounds that

contain M^{III} exclude Al₂O₃; X indicates at least one kind of halogen selected from the group

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consisting of Cl, Br, and I; Ln indicates at least one kind of rare earth element selected from the group consisting of Ce, Pr, Sm, Eu, Gd, Tb, Dy, Ho, Nd, Er, Tm, and Yb; A indicates at least one kind of metallic oxide selected from the group consisting of Al_2O_3 , SiO_2 , and ZrO_2 ; and a, b, c, d and x are respectively set so as to satisfy relational expressions $0 \le a \le 0.3$, $0 \le b \le 2$, $0 \le c \le 2$, $0 \le d \le 0.5$, and $0 < x \le 0.2$.

- 19. (Original) A method for manufacturing a radiation image conversion panel according to claim 15, wherein concentrating the slurry includes using decantation.
- **20.** (Currently amended) A method for preparing a coating material for a radiation image conversion panel, comprising the steps of:
- (a) dispersing a calcined product of stimulable phosphor in a dispersion medium, to obtain a slurry;
- (b) eliminating grains that are of at least a predetermined size from the slurry of step (a), using wet classification wherein a final mesh in the wet classification is no more than 50 μ m; and
- (c) adding a <u>polyurethane</u> binder to the slurry <u>formed in step (b)</u> that is substantially soluble therein, to form a coating material,

wherein the stimulable phosphor is <u>BaFBr:Eu</u>, <u>BaFI:Eu</u> or a mixture thereof-represented by formula (I')

wherein X represents at least one halogen selected from the group consisting of Cl, Br, and I; Ln represents at least one rare earth element selected from the group consisting of Ce, Pr, Sm, Eu, Gd, Tb, Dy, Ho, Nd, Er, Tm, and Yb; and x satisfies the relational expression $0 < x \le 0.2$.

21-23. (Cancelled)

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24. (Previously presented) A method for manufacturing a radiation image conversion

panel according to claim 1, further comprising a step of forming a light reflection layer on the

support prior to applying the coating material and a step of forming a protective film on the dried

phosphor layer.

25. (New) A method for preparing a coating material for a radiation image conversion

panel according to claim 20, wherein the dispersion medium used in step (a) is methyl ethyl

ketone, the amount of the stimulable phosphor is 10 to 300 parts by weight per 100 parts by

weight of methyl ethyl ketone, and the polyurethane binder and the stimulable phosphor are

mixed in a ratio of 1:8 to 1:40.

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